

#### ABSTRACT OF THE DISCLOSURE

A temperature detecting device is provided which can reduce manufacturing cost. Provided that the pull-up resistance has a resistance value  $R_P$  and the heat-sensitive resistance element has a resistance value  $R_T$ , the voltage ( $V_1$ ) of the heat-sensitive resistance element in the case of the first voltage extraction mode is given by " $VCC \times R_T / (R_P + R_T)$ " while the voltage ( $V_2$ ) of the heat-sensitive resistance element in the case of the second voltage extraction mode is given by " $VCC \times R_T / (2R_P + R_T)$ ". When the two heat-sensitive resistance elements are normally operating (no occurrence of disconnection or short circuit failure), the voltages respectively extracted in the first and second extraction modes have a ratio matching a ratio of the foregoing two equations ( $V_1 : V_2$ ). Thus, the two heat-sensitive resistance elements can be positively determined for a presence or absence of failure.